

GILA RIVER BASIN

09484600 PANTANO WASH NEAR VAIL, AZ

LOCATION--Lat 32°02'09", long 110°40'37", in SW_{1/4}SE_{1/4} sec. 14, T.16 S., R.16 E., Pima County, Hydrologic Unit 15050302, on right bank 60 ft upstream from dam, 2.2 mi southeast of Vail, and 20 mi southeast of Tucson City Hall.

DRAINAGE AREA--457 mi².

PERIOD OF RECORD--Jan. 1959 to Sept. 1974, water years 1975-89 (annual maximums only), Oct. 1989 to current year.

GAGE--Water-stage recorder and concrete weir. Elevation of gage is 3,205 ft above sea level, from topographic map. Jan. 1959 to Sept. 1974 (water-stage recorder) and Oct. 1974 to Sept. 1989 (crest-stage gage) at same site and datum.

REMARKS--Records fair, except for estimated daily discharges, which are poor. No known diversion above station. Records published herein represent flow by gage. Infiltration flow is not included. Base runoff past gage station consists of downvalley underflow that is brought to the surface by the concrete dam 60 ft downstream, which extends to bedrock.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 12,000 ft³/s Oct. 1 or 2, 1983, gage height, 15.25 ft, from inside highwater mark, from rating curve extended above 2,000 ft³/s on basis of slope-area measurements at gage heights 10.9 and 24 ft; no flow June 26 to July 13, Aug. 7, 1971 (result of work on infiltration gallery), June 27 to July 13, 1973 (result of ponding during construction work on dam), May 28 to June 12, and July 12, 13, 17, and 18, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD--Maximum discharge since at least 1930, about 38,000 ft³/s, Aug. 11, 1958, gage height, about 24 ft, from floodmark, from slope-area measurement.

EXTREMES FOR CURRENT YEAR--Peak discharges greater than base discharge of 2,000 ft³/s and (or) maximum (*):

| Date | Time | Discharge (ft ³ /s) | Gage height (ft) |
|--------------|------|--------------------------------|------------------|
| July 24..... | 1845 | *1,420 | *7.49 |

Minimum daily discharge, 0.04 ft³/s, June 5, 9, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|------|------|-------|------|-------|-------|-------|-------|--------|--------|-------|
| 1 | e0.40 | 0.24 | 0.18 | 0.11 | 0.14 | 0.51 | 0.48 | 0.49 | 0.13 | 0.16 | 0.89 | e0.53 |
| 2 | 0.42 | 0.21 | 0.16 | 0.09 | 0.15 | 0.54 | 0.48 | 0.45 | 0.10 | 0.17 | 0.73 | e0.51 |
| 3 | 0.42 | 0.20 | 0.16 | 0.09 | 0.19 | 0.57 | 0.42 | 0.48 | 0.10 | 0.18 | 0.66 | 0.52 |
| 4 | 0.43 | 0.20 | 0.18 | 0.08 | 0.24 | 0.60 | 0.48 | 0.50 | 0.06 | 0.19 | 0.63 | 0.53 |
| 5 | 0.41 | 0.18 | 0.19 | 0.08 | 0.28 | 0.60 | 0.58 | 0.50 | 0.04 | 0.28 | 0.63 | 0.54 |
| 6 | 0.40 | 0.16 | 0.16 | 0.06 | 0.35 | 0.58 | 0.60 | 0.53 | 0.05 | 0.14 | 0.66 | 0.54 |
| 7 | 0.41 | 0.16 | 0.13 | 0.07 | 0.36 | 0.56 | 0.55 | 0.46 | 0.05 | 0.14 | 0.71 | 0.55 |
| 8 | 0.41 | 0.16 | 0.13 | 0.07 | 0.35 | 0.57 | 0.48 | 0.44 | 0.06 | 0.14 | 0.77 | 0.55 |
| 9 | 0.40 | 0.13 | 0.10 | 0.07 | 0.36 | 0.59 | 0.48 | 0.46 | 0.04 | 0.14 | 0.78 | 0.54 |
| 10 | 0.38 | 0.14 | 0.09 | 0.09 | 0.38 | 0.53 | 0.48 | 0.47 | 0.04 | 0.15 | 0.77 | 0.56 |
| 11 | 0.38 | 0.15 | 0.08 | 0.09 | 0.35 | 0.59 | 0.48 | 0.47 | 0.05 | 5.0 | 0.75 | 0.55 |
| 12 | 0.38 | 0.13 | 0.08 | 0.08 | 0.32 | 0.65 | 0.50 | 0.44 | 0.05 | e0.39 | 34 | 0.53 |
| 13 | 0.38 | 0.12 | 0.09 | 0.07 | 0.34 | 0.63 | 0.49 | 0.42 | 0.06 | e3.8 | 95 | 0.52 |
| 14 | 0.38 | 0.13 | 0.09 | 0.08 | 0.35 | 0.62 | 0.48 | 0.38 | 0.06 | e0.31 | 4.4 | 0.52 |
| 15 | 0.38 | 0.11 | 0.09 | 0.08 | 0.34 | 0.63 | 0.49 | 0.37 | 0.06 | e0.31 | 0.25 | 0.51 |
| 16 | 0.37 | 0.10 | 0.12 | 0.09 | 0.38 | 0.65 | 0.51 | 0.36 | 0.06 | 0.30 | 0.20 | 0.50 |
| 17 | 0.38 | 0.10 | 0.12 | 0.10 | 0.39 | 0.60 | 0.48 | 0.36 | 0.06 | 0.32 | 0.20 | 0.48 |
| 18 | 0.43 | 0.11 | 0.10 | 0.10 | 0.37 | 0.60 | 0.50 | 0.34 | 0.06 | 0.38 | 0.20 | 0.48 |
| 19 | 0.45 | 0.10 | 0.10 | 0.10 | 0.39 | 0.55 | 0.52 | 0.33 | 0.06 | 0.36 | 0.20 | e0.46 |
| 20 | 0.36 | 0.10 | 0.10 | 0.10 | 0.35 | 0.51 | 0.45 | 0.32 | 0.06 | 0.32 | 0.20 | 0.45 |
| 21 | 0.35 | 0.11 | 0.09 | 0.09 | 0.38 | 0.49 | 0.44 | 0.24 | 0.08 | 0.33 | 0.20 | 0.44 |
| 22 | 0.36 | 0.10 | 0.10 | 0.10 | 0.34 | 0.53 | 0.46 | 0.23 | 0.08 | 2.7 | 0.20 | 0.44 |
| 23 | 0.34 | 0.11 | 0.12 | 0.09 | 0.38 | 0.51 | 0.52 | 0.23 | 0.09 | 0.47 | 0.19 | 0.47 |
| 24 | 0.31 | 0.13 | 0.09 | 0.08 | 0.39 | 0.48 | 0.54 | 0.22 | 0.09 | 95 | 1.00 | 15 |
| 25 | 0.31 | 0.11 | 0.05 | 0.07 | 0.40 | 0.43 | 0.56 | 0.23 | 0.10 | 24 | 0.20 | 0.80 |
| 26 | 0.30 | 0.12 | 0.06 | 0.07 | 0.41 | 0.44 | 0.51 | 0.24 | 0.11 | 49 | 118 | 0.68 |
| 27 | 0.30 | 0.14 | 0.07 | 0.06 | 0.42 | 0.39 | 0.50 | 0.23 | 0.12 | e23 | e59 | 0.63 |
| 28 | 0.30 | 0.15 | 0.08 | 0.08 | 0.44 | 0.39 | 0.50 | 0.19 | 0.13 | e59 | e0.97 | 0.62 |
| 29 | 0.30 | 0.15 | 0.10 | 0.08 | -- | 0.45 | 0.49 | 0.22 | 0.15 | 119 | e0.64 | 0.61 |
| 30 | 0.23 | 0.16 | 0.11 | 0.10 | -- | 0.49 | 0.51 | 0.23 | 0.17 | e3.2 | e0.56 | 0.60 |
| 31 | 0.23 | -- | 0.13 | 0.14 | -- | 0.48 | -- | 0.17 | -- | 0.97 | e0.54 | -- |
| TOTAL | 11.30 | 4.21 | 3.45 | 2.66 | 9.54 | 16.76 | 14.96 | 11.00 | 2.37 | 389.85 | 324.13 | 30.66 |
| MEAN | 0.36 | 0.14 | 0.11 | 0.086 | 0.34 | 0.54 | 0.50 | 0.35 | 0.079 | 12.6 | 10.5 | 1.02 |
| MAX | 0.45 | 0.24 | 0.19 | 0.14 | 0.44 | 0.65 | 0.60 | 0.53 | 0.17 | 119 | 118 | 15 |
| MIN | 0.23 | 0.10 | 0.05 | 0.06 | 0.14 | 0.39 | 0.42 | 0.17 | 0.04 | 0.14 | 0.19 | 0.44 |
| AC-FT | 22 | 8.4 | 6.8 | 5.3 | 19 | 33 | 30 | 22 | 4.7 | 773 | 643 | 61 |
| CFSM | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.02 | 0.00 |
| IN. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

| (WY) | MEAN | MAX | MIN | AC-FT | CFSM | IN. |
|------|------|------|------|-------|-------|------|
| 2001 | 3.13 | 2.40 | 1.10 | 8.4 | 0.004 | 0.00 |
| 1974 | 45.6 | 38.7 | 0.10 | 50.3 | 0.06 | 0.00 |
| 1974 | 2001 | 1966 | 1993 | 1998 | 1998 | 1974 |
| 1974 | 1974 | 2003 | 1974 | 1974 | 1974 | 1974 |

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1960 - 2003

| | | | |
|--------------------------|--------|--------|------------|
| ANNUAL TOTAL | 717.91 | 820.89 | 6.16 |
| ANNUAL MEAN | 1.97 | 2.25 | 15.7 |
| HIGHEST ANNUAL MEAN | | | 1.44 |
| LOWEST ANNUAL MEAN | | | |
| HIGHEST DAILY MEAN | 112 | Aug 5 | 119 Jul 29 |
| LOWEST DAILY MEAN | 0.00 | Aug 25 | 0.04 Jun 5 |
| ANNUAL SEVEN-DAY MINIMUM | 0.06 | Jun 12 | 0.05 Jun 5 |
| ANNUAL RUNOFF (AC-FT) | 1420 | | 1630 |
| ANNUAL RUNOFF (CFSM) | 0.004 | | 0.005 |
| ANNUAL RUNOFF (INCHES) | 0.06 | | 0.07 |
| 10 PERCENT EXCEEDS | 1.7 | | 0.63 |
| 50 PERCENT EXCEEDS | 0.54 | | 0.35 |
| 90 PERCENT EXCEEDS | 0.10 | | 0.08 |
| | | | 0.18 |
| | | | 4.3 |
| | | | 1.2 |
| | | | 0.32 |

e Estimated